REMARKS

Applicant has carefully studied the outstanding Official Action mailed on March 9, 2007. This response is intended to be fully responsive to all points of rejection raised by the Examiner and is believed to place the application in condition for allowance. Favorable reconsideration and allowance of the application are respectfully requested.

The drawings stand objected under 37 CFR 1.84(p)(5). The specification has been amended to correct the cited deficiencies and the drawings have been accordingly corrected and submitted herewith. No new matter has been introduced.

Claims 1-4 stand rejected under 35 USC §102(b) for being anticipated by Weiner et al. (US 4612455).

Claims 6-11 stand rejected under 35 USC §103(a) as being unpatentable over Weiner et al. in view of Kotov et al.

Applicant respectfully traverses these rejections, as is now explained in detail.

The circuit of Weiner et al. is employed to construct a *distributed* pulse forming network (PFN) rather than a *lumped* PFN in a basic magnetic compression based pulser.

The Examiner states that the circuit of Weiner et al. has a magnetic switch in the form of inductive windings 62 on core 68. However, Weiner et al. explicitly states (col. 4, lines 40-48): "An important feature of PFN 60, as shown in FIG. 4, is that it is a distributed network. In other words, the inductance resulting from the turns or loops of winding 62 is not lumped in a location separate from the capacitance between winding 62 and shield 64. On the contrary, the inductance of winding 62 interacts with the capacitance of winding 62 and shield 64, resulting in excellent pulse formation, while occupying minimal space."

In contrast, in the instant invention, the magnetic switch is distanced separate from the capacitor as is clearly seen in Figs. 4, 5 and 7. Claims 1 and 6 have been amended to recite this difference. Claims 13 and 14 have been added to recite the difference in a different way.

This and other facts lead to some significant differences between Wiener et al. and the instant invention.

In Wiener et al., one significant shortcoming of the circuit is that it requires additional magnetic resetting circuitry. It is derived from the circuits' topology of both the low-voltage and the high-voltage side of the transformer. Put it in other words, the circuit depicted in Fig.3 (as well as the one of Fig. 1) without connecting any other auxiliary circuits can effectively supply **only one individual pulse!** After the first pulse, the magnetic core does not return to its initial state (of induction level), and the pulser can not function

properly. In contrast, in the instant invention, there is no need for additional circuitry as the magnetic resetting is done inherently.

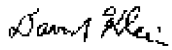
In the circuit of Weiner et al., the PFN (comparable to capacitive storage elements) is connected in series with the HV part of the transformer. In contrast, in the instant invention, the two capacitors are paralleled to the transformer. This is a significant difference. In Weiner et al., the load current flows through the transformer's secondary coil, which is characterized by a relatively very high leakage inductance. Practically this limits the pulse transition rates. In contrast, in the instant invention, the load current does not flow through the transformer in any sense.

Comparing Fig. 6 of the instant application and Fig. 5 of Wiener et al., one can see that the slew-rate ratio of the instant invention is very much higher than that of Wiener et al. This emphasizes the dissimilarity in the performances of the two circuits.

It is noted that the prior art circuit of Fig. 1 in Wiener et al. only shows a PFN (element 42 connected to the second side of the transformer. However, this prior art shows nothing at all and does not contemplate using a magnetic switch connected to and separate from a capacitor, nor does it contemplate using capacitors connected in parallel to the transformer. Thus the prior art does not anticipate or make obvious the claimed invention.

Claims 1-4 and 6-14 are accordingly deemed allowable. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,
DEKEL PATENT LTD.



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